

Exhibit 35



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION EXAMINING OPERATIONS**

Appl. No. : 11/154,894
Applicant : Hopkins, Lawrence G.
Filed : 06/15/2005
TC/A.U. : 3744
Examiner : Nguyen, Nihn H.
Docket No. : 8887.9999
Customer No. : 0152

Confirmation No. 2747

AMENDMENT

1600 ODS Tower
601 S.W. Second Avenue
Portland, OR 97204

September 8, 2006

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Office Action dated March 8, 2006, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments being on page 6 of this paper.

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A fan array fan section in an air-handling system comprising:
 - (a) an air-handling compartment;
 - (b) a plurality of fan units;
 - (c) said plurality of fan units arranged in a fan array;
 - ~~(d) said fan array having at least one fan unit arranged vertically on at least one other fan unit;~~
 - ~~(e) (d) said fan array positioned within said air-handling compartment; and~~
 - ~~(f) (e) said air-handling compartment positionable within associated with a structure such that said air-handling system conditions the air of said structure; and~~
 - (g) (f) a control system for operating said plurality of fan units at substantially peak efficiency by strategically turning on and off selective ones of said plurality of fan units.
2. (currently amended) The fan array section in an air handling system of claim 1, ~~further comprising an, wherein said control system comprises a programmable array controller programmed to operate said plurality of fan units at peak efficiency by strategically turning on and off said selective ones of said plurality of fan units.~~
3. (original) The fan array fan section in an air-handling system of claim 1, wherein said plurality of fan units are plenum fans.
4. (original) The fan array fan section in an air-handling system of claim 1, wherein said air-handling compartment has an airway path, said airway path being less than 72 inches.
5. (original) The fan array fan section in an air-handling system of claim 1, wherein said plurality of fan units are arranged in a fan array configuration selected from the group consisting of:
 - (a) a true array configuration;
 - (b) a spaced pattern array configuration;
 - (c) a checker board array configuration;

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- (d) rows slightly offset array configuration;
 - (e) columns slightly offset array configuration; and
 - (f) a staggered array configuration.
6. (original) The fan array fan section in an air-handling system of claim 1, wherein each of said plurality of fan units is positioned within a fan unit chamber.
 7. (original) The fan array fan section in an air-handling system of claim 1, wherein each of said plurality of fan units is suspended within a respective said fan unit chamber such that there is an air relief passage therebelow.
 8. (original) The fan array section in an air-handling system of claim 1, wherein each of said plurality of fan units is positioned within a fan unit chamber having at least one acoustically absorptive insulation surface.
 9. (original) The fan array fan section in an air-handling system of claim 1, wherein each of said plurality of fan units is mounted in a grid system.
 10. (original) The fan array fan section in an air-handling system of claim 1, wherein each of said plurality of fan units has a fan wheel diameter, wherein spacing between said plurality of fan units is less than 60% of said fan wheel diameter.
 11. (original) The fan array fan section in an air-handling system of claim 1, further comprising an array of backdraft dampeners, each backdraft dampener in line with a respective fan unit.
 12. (currently amended) The fan array fan section in an air-handling system of claim 1, ~~further comprising an array controller 2,~~ wherein each fan unit has a peak efficiency operating range outside of which it operates at a reduced efficiency, wherein said array controller is programmed to operate said plurality of fan units at substantially peak efficiency by strategically turning off at least one fan unit operating at reduced efficiency and running the remaining fan units within said peak efficiency operating range.
 13. (currently amended) The fan array fan section in an air-handling system of claim 1, ~~further comprising an array controller for controlling said plurality of fan units to run at substantially peak efficiency by strategically turning selective ones of said plurality of fan units on and off 2, where~~ said array controller is programmed to operate said plurality of fan units at peak efficiency for a performance level based on a criterion ~~criteria~~ selected from the following group of criteria:
 - (a) air volume;
 - (b) level of air flow;
 - (c) pattern of air flow; and

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(d) number of fan units to operate.

14. (currently amended) The fan array fan section in an air-handling system of claim 1, ~~further comprising an array controller for controlling said plurality of fan units 2,~~ wherein said array controller is programmed to operate said plurality of fan units to produce a stable operating point and eliminate the surge effects.

15. (currently amended) ~~A~~ The fan array fan section in an air-handling system of claim 1, further comprising:

(a) an air-handling compartment;

(b) a plurality of fan units;

(c) said plurality of fan units arranged in a fan array;

(d) said fan array positioned within said air-handling compartment;

(e) said air-handling compartment association with a structure such that the said air-handling system conditions the air of said structure; and

(f) ~~an array controller~~ a control system for controlling said plurality of fan units, ~~said array controller is programmed to selectively control~~ control system allowing control of the speed of each of the fan units in said plurality of fan units ~~to such that they run at substantially peak efficiency.~~

16. (canceled)

17. (canceled)

18. (currently amended) The fan array fan section in an air-handling system of claim 21 1, ~~further comprising an array controller,~~ wherein each fan unit has a peak efficiency operating range outside of which it operates at a reduced efficiency, wherein said array controller is programmed to operate said plurality of fan units at substantially peak efficiency by strategically turning off at least one fan unit operating at reduced efficiency and running the remaining fan units within said peak efficiency operating range.

19. (currently amended) The fan array fan section in an air-handling system of claim 21 1, ~~further comprising an array controller for controlling said plurality of fan units to run at substantially peak efficiency by strategically turning selective ones of said plurality of fan units on and off,~~ wherein said array controller is programmed to operate said plurality of fan units at peak efficiency for a performance level based on a criterion ~~criteria~~ selected from the following group of criteria:

(a) air volume;

(b) level of air flow;

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- (c) pattern of air flow; and
- (d) number of fan units to operate.

20. (currently amended) A ~~The~~ fan array fan section in an air-handling system of ~~claim 1~~, further comprising:

- (a) an air-handling compartment;
- (b) a plurality of independently controllable fan units;
- (c) said plurality of fan units arranged in a fan array;
- (d) said fan array positioned within said air-handling compartment;
- (e) said air-handling compartment associated with a structure such that said air-handling system conditions the air of said structure; and
- (f) an array controller a control system for controlling said plurality of fan units, said array controller is programmed to selectively control the speed of each of the fan units in said plurality of fan units to such that they run at substantially peak efficiency.

21. (new) The fan array section in an air-bundling system of claim 15 wherein said control system comprises a programmable array controller.

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Remarks/Arguments:

Claims 1-20 were pending all of which stand rejected. Claims 1, 2, 12-15 and 18-20 have been amended, and new claim 21 has been added. Claims 16 and 17 have been canceled.

Statutory Double Patenting Rejections

Claims 1, 12 and 16 were provisionally rejected under 35 U.S.C. 101 as claiming the same invention as Claims 5, 1 and 31 of co-pending Application No. 10/806,775.

Claim 1 of Application No. 10/806,775 recites "said at least six fan units." Claim 5 of Application No. 10/806,775 depend from Claim 1. Neither Claim 1 nor Claim 12 of this application recites "at least six fan units." Thus, neither Claim 1 nor Claim 12 of this application is drawn to the "same invention" as Claims 5 and 1 of Application No. 10/806,775. Claim 16 has been canceled.

Nonstatutory Double Patenting Rejections

Claims [1], [2], [3], [4], [5], [7], [8], [9], [10], [11], [13], [14], [15], [16], [17], [18], [19], and [20] were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims [1,31], [1], [2], [3], [4], [7], [8], [9], [10], [21], [25], [27], [29], [1,32], [32], [1,43], [25], and [29] of co-pending Application No. 10/806,775.

Without conceding the validity of this obviousness-type double patenting rejection, the Applicants have elected to circumvent the rejection by filing a terminal disclaimer with respect to Application No. 10/806,775. The terminal disclaimer, executed by the undersigned, is enclosed.

Claim Rejections- 35 U.S.C. §102

Claims 1-3, 5, 6, 9 and 14-17 were rejected under 35 U.S.C. §102(b) as being anticipated by Ray. Claim 1 has been amended to replace the phrase "array controller programmed to operate" with the phrase "control system for operating." The new phrase is broader than the former phrase. Support for this is found in the first paragraph of page 12 of the specification, and particularly at line 6. Claim 1 was also amended to remove subparagraph (d), and to change the phrase "positionable within" to the phrase "associated with" in subparagraph (f). As will be explained below, patentability of claim 1 does not require these limitations. Finally claim 1 has been amended to add the limitation of a "control system for operating said plurality of fan units at substantially peak efficiency by strategically turning on and off selective ones of said plurality of fan units." Thus claim 1 now includes substantially the limitations that were in original claim 2 but directed to a "control system" rather than an "array controller."

In rejecting Claim 2, the Examiner stated that in Ray "the fan array fan section further comprises an array controller to inherently operate the plurality of fan units at peak efficiency by strategically turning on and off selective ones of the plurality of fan units." The Examiner did not cite any particular passage of Ray in support of this rejection.

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Upon examination, it is clear that Ray does not teach any means to operate a plurality of fan units at substantially peak efficiency by strategically turning on and off selective ones of the fan units." Instead, Ray teaches "electronic control circuitry...which causes each of the air supply blowers 1-4 to be operated independently *according to demand as controlled by the respective thermostats*" (col. 4, lines 36-39) (emphasis added). For example, "[w]hen the heat input to zone 4 increases to a predetermined level the thermostat 18 will activate the blower for zone 4, thereby directing air from the conditioned air chamber 24 via conduit 34 into that particular zone" (col. 5, lines 34-38). Turning selective blowers on and off in Ray does not allow operating the plurality of blowers at substantially peak efficiency as is specified in amended claim 1.

Thus, Applicants respectfully submit that Claim 1, as amended, is patentable over Ray. Reconsideration and withdrawal of this rejection is respectfully requested. Claims 2-14 depend from Claim 1 and are likewise patentable for at least this reason.

Claim 15 has been amended in substantially the same manner as claim 1 except that the control system controls the speed of individual fans, rather than turning individual fans off, to cause the plurality of fans to run at substantially peak efficiency. In rejecting Claim 15, the Examiner stated that in Ray "the array controller inherently controls the speed of each of the plurality of fan units to run at substantially peak efficiency." Again, the Examiner did not cite any particular passage of Ray as supporting this rejection.

Ray states that "[t]he return air blower 60 will typically have multiple blower speeds so that the velocity of return air flow through the heat exchange coils can be varied according to the demands of the various zones of the building structure" (col. 5, lines 18-21). As shown in Fig. 2, the return air blower 60 is not a part of the array of fan units 1-4, so this portion of Ray is inapplicable to Claim 15, which recites "said plurality of fan units arranged in a fan array." Return air blower 60 of Ray does not appear to be in an array. Moreover, the above-quoted passage of Ray states that the speed of return air blower 60 is "varied according to the demands of the various zones of the building structure." There is no indication that the speed of return air blower 60 is varied to cause it "to run at substantially peak efficiency."

Ray also teaches "controlling the speed of the thermal zone blower 102 responsive to the temperature that is sensed within the thermal zone within which the thermostat 80 is located" (col. 6, lines 13-16). "During normal heat load within the thermal zone the low range sensor of the thermostat provides a control signal...which...operat[es] the blower at its low speed setting" (col. 6, lines 16-22). "When the thermostat is set for its 'cool' mode and the temperature within the thermal zone of thermostat 80 rises because the heat load is sufficient to overcome low range cooling...high range control signals" are generated to "provide an increased velocity flow of air...to the particular thermal zone to which the zone supply blower is connected for air supply thereto" (col. 6, lines 28-38). In short, there is no indication in Ray that the speed of thermal zone blower 120 is varied to cause it "to run at substantially peak efficiency."

Thus, Applicants respectfully submit that Claim 15 is patentable over Ray. Reconsideration and withdrawal of this rejection is respectfully requested.

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Claims 16 and 17 have been canceled.

Claims 1-3, 5, 6, 9 and 14-17 were also rejected under 35 U.S.C §102(b) as being anticipated by Neidhardt et al. The Examiner stated that in Neidhardt et al. "the fan array fan section further comprises an array controller to inherently operate the plurality of fan units at peak efficiency by strategically turning on and off selective ones of the plurality of fan units (Fig. 4; col. 4, lines 63-67).

At col. 4, lines 63-67, Neidhardt et al. state as follows:

By maintaining the operating fans on, either the inboard fan only or both the inboard and outboard fans, during the cycled interruption of the compressor, frost accumulation on the coil is quickly driven off.

The reference to "the coil" in this passage is apparently intended to refer to evaporator coil 38, shown in Fig. 4 (see col. 4, lines 3, 56). In any case, there is absolutely no teaching in the cited portion (or anywhere else) in Neidhardt et al. of a control system for operating a plurality of the fan units at substantially peak efficiency by strategically turning on and off selective ones of said plurality of fan units," as recited in amended Claim 1.

Thus, Applicants respectfully submit that Claim 1 is patentable over Neidhardt et al. Reconsideration and withdrawal of this rejection is respectfully requested. Claims 2-14 depend from Claim 1 and are, therefore, likewise patentable for at least this reason.

Claim 15 now recites "a control system for controlling said plurality of fan units, said control system allowing control of the speed of the fan units in said plurality of fan units such that they run at substantially peak efficiency." In rejecting Claim 15, the Examiner stated that in Neidhardt et al. "the array controller inherently controls the speed of each of the plurality of fan units such that they run at substantially peak efficiency." The Examiner cited Fig. 4 of Neidhardt et al in support of this rejection. The Applicants have carefully reviewed Fig. 4 and the accompanying description in Neidhardt et al. (col. 3, line 8, to col. 5, line 31) and can find absolutely no teaching or suggestion of an "array controller being programmed to selectively control the speed of each of said plurality of fan units to run at substantially peak efficiency." Nor is any such feature "inherent" in the controller described by Neidhardt et al.

Thus, Applicants respectfully submit that Claim 15 is patentable over Neidhardt et al. Reconsideration and withdrawal of this rejection is respectfully requested.

Claims 1 and 10 were rejected under 35 U.S.C. §102(b) as being anticipated by Krofchalk.

As noted above, the limitation of Claim 2 has substantially been incorporated into Claim 1. Claim 2 was not rejected on the basis of Krofchalk, and therefore Claim 1, as amended, is allowable over Krofchalk. Claim 10 depends from Claim 1 and is therefore also allowable.

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Claim Rejections- 35 U.S.C. §103

Claim 4 was rejected under 35 U.S.C. §103(a) as being unpatentable over either Ray or Krofchalk.

For the reasons explained above, Claim 1 is allowable over either Ray or Krofchalk. Since Claim 4 depends from Claim 1, Claim 4 is likewise allowable over either Ray or Krofchalk.

Claim 4 was also rejected under 35 U.S.C. §103(a) as being unpatentable over Ray in view of O'Connell. O'Connell was cited as teaching a "fan chamber comprising a layer of filter medium 37 to provide sealing, vibration absorption and sound attenuation (col. 2, lines 5-11)." Since Claim 4 does not recite a "layer of filter medium," it appears that the Examiner may have intended to refer to some other claim, perhaps Claim 8. In any event, both Claims 4 and 8 depend from Claim 1, which as noted above is allowable over Ray. O'Connell does not overcome the defects of Ray insofar as Claim 1 is concerned. For example, O'Connell does not teach or suggest "an array controller programmed to operate said plurality of fan units at substantially peak efficiency by strategically turning on and off selective ones of said plurality of fan units." Therefore, Claim 4 (or Claim 8) is allowable over the combination of Ray and O'Connell.

For the above reasons, Applicants respectfully request allowance of Claims 1-15 and 18-21. Should the Examiner have any questions concerning this response, the Examiner is invited to call the undersigned at (503) 227-5631.

Respectfully submitted,

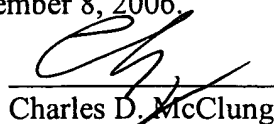


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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on September 8, 2006.

Dated: September 8, 2006



Charles D. McClung